

ATLANTIC CITY DUP.

AS A

Winter Health Resort.

EMBRACING OFFICIAL REPORTS, METEOROLOGICAL TABLES, &c.,
CONCERNING THE CLIMATE OF ATLANTIC CITY, N. J., THE
TESTIMONY OF EMINENT PHYSICIANS AS TO ITS EF-
FECTS ON VARIOUS FORMS OF DISEASE, HYGIENIC
HINTS FOR INVALIDS AT THE SEASHORE, AND
INFORMATION ABOUT THE SANITARY
CONDITION OF ATLANTIC CITY.

BY BOARDMAN REED, M. D.

SECOND EDITION.

PHILADELPHIA
ALLEN, LANE & SCOTT PRINTING HOUSE,
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PREFACE.

THE reprint from the Philadelphia *Medical Times* of a paper on "The Climate of Atlantic City, and its Effects on Pulmonary Diseases" was sent last winter to numerous physicians in various parts of the United States. There have since been many requests for additional copies, which could not be furnished, the edition having been exhausted. It has been deemed advisable in preparing a second edition to include with this the principal part of a paper contributed by me to the New York *Medical Journal* for March, 1881, entitled "What Atlantic City can do for Consumptives;" also portions of an article contributed to the Philadelphia *Medical Bulletin* for November, 1880, relating particularly to the hygienic precautions needed to be taken by invalids sojourning at the seaside, and of a communication to the Philadelphia *Medical and Surgical Reporter* of July 9th, 1881, on "The Sanitary Condition of our Seashore Health Resorts."

A letter from Dr. William Pepper, Provost of the University of Pennsylvania, written in reply to a request from me for a statement of his experience in sending pulmonary cases to Atlantic City, was not received in time for insertion in the original paper, but is now printed for the first time.

Another year's experience has been strongly corroborative of the views hitherto expressed by me as to the curative value of this climate at all seasons, but especially in the winter and spring. Last winter was much colder than the average, here as well as in Florida and all over the continent; yet quite as much benefit as usual was derived by consumptives in the earlier stages. The same may be said of persons suffering with bronchial or throat affections. But perhaps the most marked improvement has been noted in cases

of nervous exhaustion in all its protean forms, and of chronic malaria. These have almost uniformly gained rapidly and steadily here under proper hygienic conditions.

Testimony has been gathered with regard to the effect of this climate upon lung diseases especially, because, while it is generally admitted that sea air is highly curative in nearly the entire list of chronic ailments, there has been a widely-prevalent impression, both among the laity and medical profession, that consumptives are always better away from it. This impression is now known to be erroneous, it having been demonstrated by abundant clinical experience that phthisis in its earlier stages is no exception to the rule that all the morbid results of weakness and impaired nutrition, when not too far advanced, may hope for improvement from the tonic and alterative effects of a dry and stimulating sea air. This fact has been well attested in Europe, and is confirmed in the following pages by the testimony of a few of the many physicians who have long been sending consumptives to Atlantic City.

B. R.

ATLANTIC CITY, N. J., November 15th, 1881.

ATLANTIC CITY

AS A

WINTER HEALTH RESORT.

SOME years ago it occurred to me that there was need of exact and reliable facts concerning the climate of Atlantic City. With a view to obtaining such facts I began making regular observations of the weather at my office, noting the temperature, relative humidity, direction of the wind, and condition of the sky, four times daily. This was kept up for about one year. Afterwards, finding that my instruments were inferior in accuracy to those at the United States Signal Station in another part of the town, I arranged with the observer there to furnish me with any information desired.

Furthermore, in order to determine as definitely as possible the benefit to be derived from the climate by various classes of invalids, and especially by persons afflicted with pulmonary complaints, I addressed inquiries to many eminent physicians who had been in the habit of sending patients to Atlantic City in the winter and spring as well as in the summer, asking them to report the number of cases sent here, the proportion cured or benefited, the proportion aggravated if any, and the proportion which had remained stationary.

The replies were not in point of fullness all I had hoped to obtain, but, together with the meteorological data previously accumulated, they were given to the profession in an article first published in the *Philadelphia Medical Times*, for December 18th, 1880, and entitled "Winter Health Resorts ; The climate of Atlantic City and its effects on Pulmonary Diseases."

That article is here reproduced as follows :—

"Where shall we send our invalids for a change of air in winter? This is a practical question which is becoming, year by year, more important to busy physicians, particularly in the great cities of the North. There are certain chronic diseases for which a pure and invigorating air, and especially a climate which will tempt the patients out of doors, are highly desirable. For many cases a

change to such an air offers the best hope of cure, or even of amelioration.

"Florida has been much in vogue lately as a winter-resort, and undoubtedly suits numerous patients well ; but it is too far away, involving a long and tiresome journey. The distance from home and friends, and the impossibility of conferring in an emergency with the usual medical attendant, are serious inconveniences. The prevalence of malaria there is a source of danger, and the very warm and enervating character of the Southern climate unfits it for a large class of diseases altogether.

"Colorado and Minnesota are even farther away, and their climates, however tonic and useful, are so cold that invalids there can live very little out of doors during the winter ; and if they are to be kept prisoners in close heated rooms it might almost as well be in their own homes.

"Northern Africa and Southern Europe, especially Pau, Nice, Mentone, and other places along the northern shore of the Mediterranean, are just now in great repute. Invalids are flocking thither every winter, and, the impartial chroniclers tell us, are leaving their bones in the cemeteries there in sadly large numbers.

"Dr. Madden, in his 'Health-Resorts of Europe and Africa,' says:—'With one exception the most frequented winter health-resort in Europe is Pau;' then proceeds to denounce the climate as 'essentially cold, variable, damp, and dreary during the winter.' During one December while he was there he states that 'the thermometer *fell eleven times to zero.*'

"Dr. John Parkin, in his work on 'Climate and Phthisis,' is equally emphatic in condemning that climate, saying, among other things, that 'of a number of patients I have known who passed a winter in Pau, not one received any benefit—the majority died soon after their return.'

"As to Nice and Mentone, Dr. Madden quotes several medical travelers and former resident physicians to the effect that these places are exposed to very sudden changes of temperature, and that the native residents are very subject to pulmonary complaints, which with them are apt to run a rapid course. Dr. Parkin, in the work already quoted, is particularly severe upon the climate of those places, stating that though it is usually very warm there in the sun, insomuch that umbrellas are indispensable, it is apt to be cold in the shade, necessitating the heaviest wraps. Crossing the street is like passing from summer to winter. The same author shows that, from the location of these towns in the neighborhood of mountains, some of whose tops are always covered with snow in winter, they must be continually subject to cold, raw winds, which are all the more intolerable and dangerous because of the heated air which they displace.

"Says Dr. Parkin:—'During January and February, then, there

would be two cold winds prevailing at Mentone, as is frequently the case at Nice. It is not surprising, therefore, that I should have left the latter town in the month of March in a snow-storm, or that snow should have fallen heavily all the way to Genoa.'

"Dr. J. H. Bennett, of Mentone, the chief eulogist of that climate, insists very strenuously upon certain precautions against taking cold. 'Without them,' he says, 'it is unsafe and treacherous. This is evidenced by the great mortality of the natives of the Nice and Mentone districts by pneumonia and pleurisy, two of the commonest maladies.'

"Dr. Parkin's conclusion is that the *Riviera* is 'one of the most unfavorable and dangerous climates for chronic diseases of the respiratory organs, and especially for phthisis.' As to Africa, he cites army reports showing that 'of the British troops passing through Egypt during 1872 *en route* for India, 29.9 per 1000 were attacked with phthisis, and 2.3 per 1000 died.' He adds, 'When it is remembered that these patients manifested no symptoms of the disease when they left England, otherwise they would have been detained, this result speaks trumpet-tongued as regards the influence of such a climate in the development of phthisis.'

"If these are the most desirable winter-resorts in the Old World, American invalids, especially those suffering from chronic pulmonary affections, would do well to remain on this side of the ocean.

"Atlantic City, New Jersey, a place most favorably located as regards convenience of access, being ninety minutes' ride from Philadelphia by the West Jersey Railroad, and only four hours from New York by the Pennsylvania Railroad and its West Jersey branch line, possesses certain physical advantages which are well worth considering. It has been twenty years or more since physicians began sending patients here in winter. First only now and then a courageous invalid ventured here at this season, but their numbers steadily increased. The experiment proved so successful in hastening the convalescence from acute disease, in improving a large class of chronic affections, and especially in arresting numerous cases of incipient as well as confirmed consumption, that within the last three years the travel to the place in winter has reached very considerable proportions, and the numerous thoroughly-heated winter hotels—some of which are as sumptuously furnished and as luxuriously conducted as the leading houses at the summer-resorts—are crowded with invalids, convalescents, and wearied society people through all the months from January on.

"Actual experience has demonstrated that sea air is as valuable in winter as in summer. It also bears out the statistics which prove that the climate of Atlantic City is superior to that of most sea-coast towns, being drier, more equable, and, considering the latitude, unusually mild.

“The city—for it is in fact as well as in name a city, having a permanent population of six thousand, and being supplied with gas, street-cars, &c.—is situated in latitude $39^{\circ} 22'$, on an island ten miles long and averaging about half a mile wide. This is separated from the mainland at either end by broad bays or inlets, which are connected by a narrow arm of the sea called ‘The Thoroughfare.’ There is no body of fresh water nearer than the Delaware river, distant about sixty miles, and the salt-water bays to the landward side are nearly always open, ice seldom forming, except for a short time occasionally in the severest winters.

“Another peculiarity of the location is that all the winds from the landward must pass for long distances—hundreds of miles in some directions—over a very dry and porous sandy soil upon which snow rarely lies for any time. These winds, including those from the north, north-west, west, and south-west, are therefore to some extent both dried and warmed in their passage.

“INFLUENCE OF THE GULF STREAM.

“Though the coast of Southern New Jersey has a general direction from north-east to south-west, the beach at Atlantic City trends more to the westward, so that it faces almost directly southward. Therefore south as well as east winds are sea breezes here, and both blow across the Gulf Stream, which, by the way, exercises considerable influence upon the climate of this part of the coast.

“Mr. C. P. Patterson, Superintendent of the United States Coast and Geodetic Survey Office at Washington has kindly furnished me with a large map indicating accurately the course of the Gulf Stream, and with some interesting facts concerning it.

“This map shows at a glance that the heated waters of the tropics, pouring through the space between Cuba and Florida, flow in a north-easterly direction along the coast of Georgia and the Carolinas, diffusing themselves as they go, until from a compact stream less than fifty miles wide, they have become opposite Chesapeake Bay a broad expanse upwards of four hundred miles in width. This really includes numerous parallel or slightly diverging currents of very warm water with overflow currents of a somewhat lower temperature. One of these overflow currents approaches within sixty-five miles of Atlantic City, while it is one hundred and ten miles from Sandy Hook. The principal current is farther away, being one hundred and thirty-five miles from Atlantic City, one hundred and eighty-five miles from Sandy Hook, and about the same distance from Long Branch and Montauk Point.

“But the exceptional mildness of this climate may be attributed to the peculiar course of the Gulf Stream in this vicinity as much as to its proximity. The innermost current, according to the map received from the Coast Survey office, has a direction opposite Atlantic City of east-north-east, but turns more and more to the eastward till in latitude 40° —that of Philadelphia—it bears nearly due

east. The main current turns more abruptly, and a little north of latitude 38° , some distance to the southward of Atlantic City, has a course directly eastward. Our south, south-east, and east winds, then, must all pass for three hundred to five hundred miles at least over more or less heated water which has come directly from the Gulf of Mexico. Our only ocean breezes not affected in this way are those from the north-east, and experience shows that these are the only winds which are generally unpleasant here. But for places farther up the coast, particularly those north of latitude 40° , the case is different. Neither their north-east nor east winds can be appreciably modified by the Gulf Stream. Their south and south-east winds may be favorably influenced to some extent, but less than are the same winds at Atlantic City, since they pass over a much larger surface of cold water after crossing the Gulf Stream. It may be added that some small maps issued by the Signal Service office represent the Gulf Stream as occupying different positions in winter and summer, but on this point Mr. Patterson writes, 'I greatly doubt if there can be any material change of the stream from season to season; at least there has been no reliable evidence obtained on that subject.'

METEOROLOGICAL STATISTICS.

"To Sergeant E. W. McGann, who has charge of the United States Signal Station at Atlantic City, I am indebted for meteorological statistics and official records, from which the following information, bearing directly upon the subject of the climate of the place, has been condensed and tabulated:—

Temperature, Humidity, Barometrical Pressure, and Rainfall at Atlantic City, New Jersey.

Months, 1880.	Mean temperature.	Range of temperature.		Mean humidity.	Mean barometer.	Rainfall, in inches.
		Max.	Min.			
January,	41.1	64	13	79.3	30.189	1.70
February,	38.2	71	11	74.4	30.129	2.85
March,	40.1	72	18	71.9	30.061	5.97
Mean for three months.	39.8		75.2	30.126	10.52

"The mean temperature for January, February, March, and December, the four coldest months of the year, was, in 1879, 34.7° ; in 1878, 36.8° ; and in 1877, 35.9° .

"The prevailing winds in winter are those from the west and north-west, which are usually dry and bracing. The east and south winds, which often blow for days at a time, are warmer and more humid. North-east winds, which are unpleasant, usually prevail for

two or three days at the time of the equinoctial storms, but are infrequent during the remainder of the year.

"Observations taken at my office, in the centre of the town, at 7 A. M., 12 M., and 6 and 10 P. M., show that in December, 1879, there were twenty-six days during which the thermometer did not fall below 32°—the freezing point; also that there were only two days in the same month when the thermometer did not indicate at noon a temperature above 40°; and that there were ten days upon which it was not below 50° at the same hour. During the January following (1880) there were twenty-four days during which the mercury never fell below the freezing point at any hour, and only two days during which it went below 30°. It was only once in the same month lower than 40° at noon, and only three times lower than 45° at the same hour. On nineteen of the thirty-one days the thermometer stood at 50° or above at mid-day.

"These mid-day temperatures are obviously more important than averages, for it is in the daytime that invalids take their airing out of doors.

"The dryness of this climate, as compared with other seaside resorts, is best shown by the statistics of the rainfall, which is less here than at any other place on the coast, as appears from the table given below. The readings of the hygrometers at the different stations are not so significant, since at some of them, including Atlantic City, the instruments are located so near to the beach, and at so low an elevation above the sea-level (less than thirteen feet here), as to be affected by the spray, during strong winds off the water, and by occasional morning mists, which do not extend back into the town.*

Annual Amount of Rainfall at the Principal Cities and Stations on the Atlantic Coast.

Stations.	Year ended June 30th, 1879.	Year ended June 30th, 1878.
Atlantic City, N. J.,	40.60 inches.	42.90 inches.
Barneget, N. J.,	49.38 "	52.35 "
Boston, Mass.,	62.96 "	54.50 "
Cape May, N. J.,	42.44 "	47.99 "
Charleston, S. C.,	64.33 "	68.62 "
Galveston, Texas,	51.03 "	67.47 "
Jacksonville, Fla.,	51.62 "	52.11 "
Newport, R. I.,	52.20 "	55.84 "
New Orleans, La.,	58.29 "	73.31 "
New York, N. Y.,	43.68 "	42.68 "
Norfolk, Va.,	44.44 "	66.28 "
Portland, Me.,	41.10 "	45.61 "
Sandy Hook, N. J.,	60.37 "	54.86 "
Savannah, Ga.,	55.14 "	52.44 "
Wilmington, N. C.,	50.90 "	84.12 "

* Since the foregoing was published, it has been ascertained from the records of the signal station here that there is greatly less wind at Atlantic City than at most points on the coast. For instance, the whole movement of the wind during the year 1879 was 84,117 miles at Atlantic City, 109,059 miles at Barneget, and 135,883 miles at Cape May.

Thus at the neighboring stations on either side of this place there are, on the average, much higher winds.

“The mean barometer for the year ended June 30th, 1879, was higher at the Atlantic City station than at any other on the coast north of Chesapeake Bay, and, with one or two exceptions, the same may be said as to the preceding year. This is a matter of importance, since depressions of the barometer affect the majority of invalids far more decidedly and injuriously than low temperatures. An extra wrap out of doors, or a fire in-doors, will perfectly antidote any ordinary degree of cold, but it is far more difficult to render comfortable the invalid whose breathing is distressed or whose joints and nerves have been set to aching by a sudden fall in the atmospheric pressure. Barometrical changes are also connected intimately with variations in the electrical conditions of the atmosphere, and these again strongly impress the delicate nervous systems of the sick.

“In the following table the figures represent the average atmospheric pressure for the years named at the sea-level, allowances having been made for differences in the elevation of the stations:—

Table Showing Mean Barometer at Various Stations.

Stations.	Year ended June 30th, 1879.	Year ended June 30th, 1878.
Atlantic City.	30.031	30.002
Barnegat,	30.029	29.998
Boston,	29.975	29.969
Cape May,	30.029	30.007
Galveston,	30.049	29.995
Jacksonville,	30.079	30.030
Newport,	29.993	29.980
New York,	30.026	30.006
Portland, Me.,	29.944	29.952
Sandy Hook,	30.014	30.000

“After all, however, it is with climates as with medicines,—trustworthy evidence as to what they have accomplished is the most valuable. With regard to nervous, rheumatic, gouty, dyspeptic, and various other chronic ailments (including most of those peculiar to women), which are usually found to be benefited here in the summer, equal benefit may be expected in the winter. Convalescents from acute disease, or from surgical operations, nearly always improve remarkably upon being removed to this place from the large cities.

“As to diseases of the respiratory organs, I have had personal knowledge of many patients suffering from various forms of such affections who have made trials of this climate in winter. The bronchial and laryngeal cases have, as a rule, improved, some of them very decidedly, though there have been exceptions. The consumptives who were in the third stage, or in any stage with evidences of actively progressing disease of the lung and decided

hectic, have only exceptionally been benefited. Those, however, in the pretubercular or incipient stage, and those even in the advanced stages where the destructive process has been advancing slowly, have often experienced very marked improvement. In a considerable proportion—about one-fourth—of the cases of these latter classes, the disease has been apparently arrested, and some of them seem to be cured.

“Detailed reports of the cases I have treated at Atlantic City would fully bear out the foregoing general conclusions, but would unduly extend this paper and necessitate the exclusion of several reports I have received from prominent Philadelphia physicians concerning the effect of this climate upon their patients, in winter especially. Some of these physicians have been sending patients hither for more than twenty years. Their testimony is more valuable than mine, and can not be impugned on the ground of partiality.

“It is a significant fact that pneumonia and bronchitis are of infrequent origin here, and when they do occur the patients *almost invariably recover*. Upon this point my experience as a resident physician enables me to speak very positively. I have not known an uncomplicated attack of either disease to prove fatal.

REPORTS FROM PHYSICIANS.

“The reports from physicians above referred to were received in response to inquiries recently sent to them. Many others wrote brief apologies, not having the notes or the leisure to tabulate the results of their experience as I had requested. Only one physician objected to the climate either for bronchitis or early phthisis.

“Dr. Laurence Turnbull writes; ‘The number of cases of phthisis that I have sent to Atlantic City have been few *in the last stages*, as I found they were not improved by a residence at the seashore, dry even as it is,’ adding that a few cases in those stages were aggravated, but goes on to say, ‘I have been much pleased with its influence on the first stages of phthisis, asthma, laryngitis, bronchitis, and nasal catarrh, when all ordinary means have failed in the city, by causing improvement in the appetite, assisting the digestion, and giving a healthier tone to the skin. In convalescence from catarrhal pneumonia and typhoid fever the results have been most gratifying. In certain forms of *otitis media purulenta* I do *not* find the air of Atlantic very beneficial, and in many cases diseases of the ear are caused by exposure of that organ to the waves. In strumous diseases of eyes, joints, limbs, &c., I have found the change to Atlantic City, if persisted in for several seasons, of permanent benefit.’

“Dr. Thomas J. Yarrow writes: ‘It has not been my practice, as a rule, to advise patients suffering with tuberculous and other

diseases of the respiratory passages to sojourn at the seaside. Exceptionally, I have had them go to Atlantic City, and have known cases of incipient phthisis, chronic bronchitis, asthma, and laryngitis to improve in that location. My experience of late is inducing me to recommend a larger number of such cases to reside at Atlantic City.'

"Dr. Thomas G. Morton thus bears testimony: 'I have been in the habit of sending to the shore at Atlantic City many patients, more especially surgical cases, but a large number also of those with lung affections, and especially those having a (hereditary) tubercular disposition, and I think especially such cases have been vastly benefited by the sojourn.'

"Dr. James Darrach, of Germantown, writes: 'Have sent several cases of autumnal catarrh to Atlantic City, and think without exception they were benefited, two of them being certainly exempt from these attacks while at the shore. The only case of slow convalescence from pneumonia died at Atlantic City. This was about twenty-three years ago. A case of obstinate general bronchitis was cured in about ten days. A case of what I supposed to be tubercular laryngitis was very much benefited, and subsequently recovered. I have also had other cases of obstinate catarrh which returned well after a sojourn at Atlantic City.'

"Dr. Eugene P. Bernardy reports as follows: 'With but one exception, all my cases of phthisis, both in the early and late stages, amounting to twelve in all, have been decidedly benefited by a sojourn at Atlantic City, and one case positively cured,—that is, as far as human ear can ascertain. Of the three cases of convalescence from pneumonia all were decidedly benefited. In a child suffering from chronic pneumonia the lung in a few weeks was almost entirely cleared up. In bronchial affections (chronic) I have seen no permanent benefit in any of the six cases I have sent there; all benefited while at the seashore, but a few months after their return relapsed. The case of phthisis cured had been examined by myself and Dr. Hall in Philadelphia, and while at the seashore examined by Dr. L. Turnbull. We all diagnosed incipient phthisis. This was nearly six years ago. On her return she had gained forty pounds, and has remained well ever since.'

"Dr. John H. Packard says, referring to Atlantic City, 'I can only say that I frequently advise convalescents to go there, and that it is a very common thing with me to be asked by patients whether it would not do them good to spend a week or two there. I do not now recollect any case that has been wholly without benefit from that climate, and could adduce many that have gained great advantage from it.'

"Dr. D. Murray Cheston writes: 'I can not say how many cases of pulmonary or bronchial troubles I have sent there, but the general result has been most satisfactory. The cases were all sent in the

late winter or early spring months, and have invariably returned improved.'

"Prof. J. M. Da Costa writes briefly, as follows: 'I have sent too few patients with pulmonary disease to Atlantic City to have the data to answer your questions. Some who were in a run-down condition and affected with chronic bronchial catarrh did very well.'

"Dr. Ellwood Wilson writes that in the summer months he does not think patients with fully-developed phthisis improve by a protracted residence at Atlantic City, but adds, 'During the winter months—say from October to July—I regard it as a very favorable locality for consumptive patients.'

"Dr. R. J. Levis writes that his practice (being almost exclusively surgical) 'is not of a kind to furnish experience with regard to the beneficial influence of Atlantic City in pulmonary affections,' but that he has 'a good opinion of its dry and mild climate.'

"Dr. James J. Levick has not sent any cases of phthisis, but has sent 'several cases of laryngeal and bronchial irritation and one or two cases of hay asthma, which improved greatly while at Atlantic City.' He adds, 'The cases which have derived most benefit, however, and of which I have sent not a few in the late winter months, have been patients after typhoid fever,—patients whose nervous systems have been much disturbed, persons who have needed brain rest, &c.'

"Dr. William H. Bennett, resident physician at the Children's Seashore House and Seaside House for Invalid Women at Atlantic City, contributes the following full report: 'My experience of the effects of a sojourn at Atlantic City upon those suffering from pulmonary diseases has been confined to what I have seen among transient visitors during the summer months of the past seven years. I have had little or no experience of the effects either of a prolonged stay or of a stay in winter. I can not give you exact figures, but the following is a fair statement of what I have observed. My patients were, with the exception of a majority of those suffering from phthisis, nearly all children. I have had not less than a hundred cases of acute bronchitis, nearly all of which ran a milder and shorter course than similar cases do in Philadelphia. The majority of these cases had during treatment the best possible hygienic surroundings, but a few which were much exposed during cool, rainy weather in leaky, damp apartments, seemed to do equally well. A few, perhaps ten, cases of subacute bronchitis, which had remained stationary in the city for some time, rapidly recovered at the seashore. Three or four cases of chronic bronchitis, with emphysema and occasional severe attacks of asthma, greatly improved; but about an equal number showed no change. Two or three cases of tardy convalescence from pneumonia made much more rapid progress towards recovery after their removal to the seashore. Two cases of empyema with external fistulæ greatly improved. About

twenty cases of phthisis have been under my care at Atlantic City. These have been in all stages of the disease. A very few, I recall but three, derived no benefit; all the others improved in general health. In some, even of the advanced cases, the improvement was marked. In many of the cases the cough became less troublesome and the breathing less labored. Nearly all slept better. Hectic frequently disappeared entirely, or was greatly lessened. These cases, with two exceptions, remained too short a time to allow of any inference in regard to the effect of their stay upon the progress of the disease itself. One of these two exceptional cases remained three months. It was one of the few that did not improve at all, and the disease ran its usual course. The other spent most of the time during the last eighteen months of his life at Atlantic City, and his downward progress was undoubtedly much retarded by so doing. I am aware that the experience which I have thus detailed has been too meagre, except perhaps in the cases of acute bronchitis, to allow of any general conclusions. But, after comparing my own experience with that of others, I am convinced that the atmosphere of Atlantic City in summer (perhaps also in winter, but I do not know) will prove especially beneficial in the large majority of cases of diseases of the respiratory organs, and that the very common opinion that the sea-coast is everywhere unsuitable for cases of phthisis has little foundation. So thoroughly am I convinced of this fact that I am striving to have special provision made in the Seaside House for Invalid Women for consumptives, and in doing so I am but following in a small way the example set by the establishment of the magnificent Royal National Hospital for Consumption on the sea-coast of the Isle of Wight.'

"The good accomplished by this climate I attribute not to any specific influence of the air upon the lungs, but to its tonic and alterative properties, acting by the improvement of digestion and nutrition, the promotion of sleep, &c. Atlantic City is the most accessible to the New England and Middle States of any place having claims as a winter resort and admitting of out-door exercise for most invalids the whole winter through."

A DRY AND BRACING CLIMATE.

Dr. William Pepper's report of his experience in sending patients to Atlantic City was not received until after the publication of the above article. It is emphatic testimony from a recognized authority in pulmonary diseases, and is therefore given a place here:—

"PHILADELPHIA, 1811 Spruce Street.

"MY DEAR DOCTOR REED:—In reply to your question as to my experience with the climate of Atlantic City in cases of diseases of the chest, I would make the following remarks:—

"I am more strongly convinced each year of the advantage in the treatment of such cases possessed by dry, bracing climates as

compared with moist, sedative climates. Undoubtedly there are certain special types of disease that do better in the latter, but it has seemed to me that the benefit derived amounts to palliation or relief, and not to radical cure. One difficulty attaching to the residence of invalids in dry, bracing climates is the fact that a far greater degree of attention to personal hygiene and systematic regimen is required. There are fewer risks of renewed congestions or increased catarrhs in a moist sedative climate, it is true; but on the other hand, if the patient is carefully instructed by his medical adviser as to the proper mode of living in a dry, bracing climate, and is willing to faithfully attend to all the details of such instructions, there is in my judgment a far higher degree of actual, permanent benefit to be secured in the great majority of cases.

"This applies especially to patients who are still in the curable stage of consumption, for in a large proportion of cases of phthisis there is an early stage when no true tuberculous disease exists, and when a cure is possible under the combined influence of suitable climate, rigidly careful hygiene, and judicious medical treatment.

"I would further say that I have seen enough of the results of the climate at Atlantic City to satisfy me that it acts powerfully in most cases as a dry and bracing climate. Many cases of incipient phthisis, and even of phthisis in the second stage, have been greatly and permanently benefited by a residence there under a strict rule of living and treatment. In several cases of chronic pleurisy with marked atony of the skin and system, and retarded absorption of the morbid products, I have seen the removal to Atlantic City soon followed by rapid improvement. I am referring to this climate as I have observed it at all seasons of the year. And in respect particularly to that which I have just mentioned, the element of relaxation of the skin, which is common to so many diseases and is so powerfully conducive to renewed attacks of congestion or inflammation, I have observed excellent results from the stimulating dry air of Atlantic City.

"In retarded convalescence from acute diseases, and in conditions of impaired nervous tone, I have also found its climate very valuable. On the other hand, in the majority of cases of organic heart disease and of bronchial asthma, the results of residence at Atlantic City have not been favorable.

"It is unquestionably an admirable climate, and I am convinced that if those who resort to it would but observe with sufficient patience and minuteness the necessary precautions, they would for the most part avoid the bad effects that some have experienced, and would find it highly beneficial in the conditions I have above mentioned, as well as in others to which I have not time to allude.

"Yours very truly,

"WILLIAM PEPPER.

"DR. BOARDMAN REED,
Atlantic City, N. J."

My experience as a resident physician coincides in the main perfectly with that of Dr. Pepper as above recorded ; but with regard to asthma, it has happened to me to see a majority of cases do well at Atlantic City, though with some few the climate has manifestly disagreed. One prominent railroad man who suffers much from asthma when inland, spent the whole of last winter here with entire relief.

FURTHER ADVANTAGES OF ATLANTIC CITY AS A SANITARIUM.

Certain partisans of Florida and Minnesota last winter engaged in a spirited controversy concerning the merits of those regions respectively, as resorts for consumptives in winter. Since these climatic extremes were each setting forth its claims so earnestly in the New York *Medical Journal*, it occurred to the writer that the many marked advantages of Atlantic City ought to be placed before the readers of the same publication. Hence an article entitled "What Atlantic City can do for Consumptives," was prepared and appeared in the number for March, 1881. The following portions are deemed worthy of being reproduced in this pamphlet :—

"It does not seem necessary to decide in favor of either Florida or Minnesota—the extreme south or extreme north—as the only proper residence for such patients in the winter season. Professor Bennett in his work on 'Pulmonary Consumption,' expresses a sentiment on this point, which, though Dr. Kenworthy has quoted it, appears scarcely to help his case. It is this: 'Now that medical doctrines have changed, that vitalistic and sthenic views of treatment prevail, and are found to give infinitely more satisfactory results than those that followed antiphlogistic treatment, the medical mind in America and Europe looks about for a colder climate. As usual, the pendulum has a tendency to pass to the other extreme ; to go from Madeira, Jamaica, and Barbadoes, from Havana, Florida, and Nassau, to the ice-covered summits of the Swiss mountains, to the frozen plains of Northern America. Many minds can never constitutionally accept and follow the golden adage, "*Medio tutissimus ibis*;" they can not remain in the middle of the road ; they must pass from one extreme to the other.'

"Evidently Professor Bennett considers Florida and Minnesota as extremes, and would give the preference to some middle region. Atlantic City, N. J., situated in latitude 39° 22', is just about midway between the peninsula of Florida and the 'frozen plains of Northern America,' and may therefore claim to be the 'golden mean.' It is rapidly growing in favor as a winter resort for many classes of invalids. It has one of the driest and most equable

climates on the coast, has better hotel accommodations than can be found in either Florida or Minnesota, and is so accessible to the New England and Middle States that a trip hither is neither a serious undertaking nor a finality involving a complete cutting adrift from home, friends, and physicians, with the prospect of dying among strangers if the climate should not suit.

“There are many patients who are drifting into phthisis as the result of a general break-down following excessive devotion to business or pleasure. These may not care and do not need, to expatriate themselves for half the year. They may often do perfectly well at home, provided they avoid all excesses and have the best possible medical treatment; but, their vital forces being at a low ebb, they need occasionally the stimulus to be derived from a few weeks’ sojourn in some invigorating seaside climate, where it is not so cold as to keep them in-doors, and yet not so warm as to relax their tissues and still further debilitate them. It is this class of phthisical cases, and numerous other affections resulting from nervous exhaustion, that we see most of here, and find to receive most of the benefit from the climate.

“Through the courtesy of Sergeant E. B. Garriott, the observer in charge of the signal station in New York, some statistics of the weather in that city during the three spring months of the year 1880 have been obtained, and in the following table are compared with the corresponding figures for Atlantic City, furnished by the observer here:—

	Mean Temperature.	Rainfall in Inches.	Mean Barometer.
<i>March, 1880.</i>			
New York City,	34.0	4.66	30.065
Atlantic City,	40.1	5.97	30.061
<i>April, 1880.</i>			
New York City,	49.0	3.38	30.015
Atlantic City,	49.3	1.83	30.045
<i>May, 1880.</i>			
New York City,	65.0	0.82	30.059
Atlantic City,	63.1	0.54	30.088

“From this table it will be seen that the temperature during March averaged six degrees higher here than in New York City; in April it was only slightly higher; and in May, when New York began to experience its foretaste of the summer heats, it averaged cooler in Atlantic City. The rainfall was less here in April and May, though a little greater during March, than in New York.

“During the entire year ended June 30th, 1879, the amount of rainfall in New York was 43.68 inches, as against only 40.6 inches at Atlantic City. Taking a series of years, the rainfall in New York City is found to average only a little more than at Atlantic

City, though greatly *less* than at most seaside stations. For instance, during the two years ended June 30th, 1879, there were 135.02 inches of rainfall at Wilmington, N. C., 108.04 inches at Newport, R. I., 103.73 inches at Jacksonville, Fla., 86.36 inches at New York, and only 83.5 inches at Atlantic City.

"If it were desirable to prolong this article, I could cite numerous cases of consumption which have been markedly benefited by a winter's residence here. I can recall several persons who came here a few years ago with chronic cough and evidences of consolidation in part of one lung, and, having experienced decided improvement, have remained ever since, winter and summer. The disease in these cases seems to be arrested. The majority of such patients here are from Philadelphia and Pennsylvania, but within the last two or three years I have seen many consumptives from New York, as well as from Boston and other cities of New England. Some who came in the last stage found no benefit, but nearly all who have come while the disease was yet in an early stage, or, if further progressed, was pursuing a slow and chronic course, gained, at least, for a time.

"One notable case is that of a New York merchant who spent last winter here. After having had several hemorrhages and become considerably emaciated, he came here early in November, with instructions from his physicians to proceed farther south as soon as the weather grew too cold for him. He remained all winter, walking out almost daily, and returned to New York in the spring to resume his business, greatly improved in health.

"Atlantic City offers, then, as its chief advantages for winter residence, a pleasant and highly remedial climate and great accessibility. But a place where invalids accustomed to the usual comforts, luxuries, and social enjoyments of civilization are expected to reside for months at a time, must possess other attractions besides a good climate and accessibility, else *ennui* and home-sickness would soon more than counteract the exhilarating effects of the air, and then the more numerous the railroads, the quicker an escape would be made.

"Atlantic City is now one of the largest of the distinctively seaside towns in the United States, having a permanent population of six thousand. It has church services conducted all the year, according to the Episcopal, Catholic, Presbyterian, Methodist, and Baptist forms of worship, with the usual social organizations of these different denominations. The place also boasts of street railways, omnibus lines, and no lack of carriages and phaetons for hire at all seasons; good fishing and shooting; circulating libraries; hot and cold sea-water baths; and finally, excellent hotels, at some of which, during the latter part of the winter, there is to be found as choice and brilliant a society as at the height of the summer season."

HYGIENIC HINTS AND SANITARY PRECAUTIONS,

In an article contributed to the Philadelphia *Medical Bulletin*, for November, 1880, the writer thus alluded to some important hygienic considerations :—

“The matter of diet here is not so important in winter as in summer. Errors in this respect are not then apt to be followed by such serious consequences. But it is safe to counsel all invalids to restrain the prodigious appetite they are almost sure to acquire soon after coming. Otherwise, constipation, headaches, and loss of appetite eventually result, showing that an overloaded stomach and embarrassed liver have struck work.

“It is a mistake to suppose that one can not take cold at the seashore.

“It is necessary, then, that invalids here should take the usual precautions against being chilled. In the winter season, and on summer evenings, wraps of some kind are always in order, out of doors, though usually they need not be heavy.

“As to exercise, while some is needed by the weakest invalids, even though only of a passive kind, such as massage by a manipulator, or rubbing by an ordinary attendant after the bath, there is commonly little danger that those able to walk shall not get enough. Many are inclined to take too much, owing to the extraordinary stimulant effects of the air, and need to be restrained, lest they exhaust their small stock of vitality as fast as it can be replenished. But this tendency is far less in winter than in summer, when the nightly hops and other multitudinous pleasures and dissipations keep the more impressionable visitors in a constant whirl of feverish excitement.

“There is, at this season, a restful air about not only the select cottage boarding-houses, but also the largest hotels, even when crowded as they are in February and March with the *élite* of the great cities. The tired brain-workers and exhausted devotees of fashion, equally with the convalescents and more chronic invalids, having come to rest and recuperate, go about it, generally, in a quiet, sensible way.

“One word, finally, as to medicinal treatment. For some cases the air alone is sufficient. Others get on famously with the air and the help of judicious bathing. Still others need medicines, and lose by having them stopped during their stay at the seashore. For these last, the tonic and alterative virtues of the air often furnish just the adjuvants necessary to accomplish the cure. The medicines which at home were nugatory or only half successful may succeed perfectly with the aid of the sea-air, when neither, alone, would be sufficient.”

The following, with regard to the sanitary condition of Atlantic City, is from an article contributed by the writer to the *Philadelphia Medical and Surgical Reporter* of July 9th, 1881:—

“The sandy beaches on the New Jersey coast are generally free from malaria, except at points where freshwater streams empty into the ocean. Professor Alfred L. Loomis, of New York, in a recent lecture, discussed the subject of malaria with his accustomed ability. He said: ‘Salt-water marshes are, as a rule, especially free from malaria; but mix salt and fresh water, as on some of the New Jersey marshes, and you have the conditions for generating the poison. Marshes that rest on a substratum of sand are not so malarial as those that rest on limestone, clay, or mud.’

“Atlantic City, which, by reason of its rapid growth and prominence among health resorts, is now attracting to an unusual degree the critical attention of sanitarians, is fortunate in being surrounded by a plenitude of unmixed salt water, and in being founded upon the driest of sand. So far, therefore, as concerns malaria, that subtle, intangible poison, which defies alike the microscope and the reagents of the chemist, but produces in some unknown way the periodical fevers, Atlantic City seems to be highly favored. Intermittent and remittent are strangers to the regular residents, and it is the constant experience of malarial patients coming here that they obtain rapid relief with far less medication than at home, often especially in the case of children, with no medication at all.

“Among the important improvements lately effected may be mentioned the following: There has been a general filling up of lots which were below the city grade. A most stringent contract has been made for the removal of garbage, at least once a day, in sealed or closely-covered wagons, from every hotel and dwelling-house in town, and its transportation by rail back into the country, where it is used for fertilizing purposes. All privy wells are required to be cleaned at stated intervals, and the contents removed in odorless excavators, and these latter appliances are already here in use.

“A few words may be said as to the drainage of Atlantic City. There are now eight sewers, which run from the ocean side of Pacific Avenue across the town and empty into a canal or ditch out on the meadows, which in turn empties into Absecon Inlet. This would be objectionable if the attempt were made to carry off by these sewers any animal refuse, or other offensive matters, such as that from water-closets, or even kitchen-slops. Though they have a fall of from three to six inches in every one hundred feet, it would be impossible for them to remove such substances with sufficient rapidity and thoroughness; and even if they could, to pour such a quantity of offal into the ocean at our very doors would be most undesirable. Therefore, the sewers are used only to drain away the

ordinary surface water, the refuse matters being removed as above described.

“The system in use here, as now carried out, is believed to be the best attainable on the flat seaside beaches. If any sanitarian can suggest a better, the health authorities of Atlantic City would be pleased to hear from him.

“Another important consideration at these seaside resorts is the drinking water. At many places the surface water obtained by digging a few feet in the sand is habitually used for drinking and culinary purposes. This is decidedly unsafe. Intestinal fluxes, and even typhoid fever, may be produced in susceptible persons by using such water. The hotels, boarding-houses and cottages in Atlantic City are supplied with cemented cisterns or wooden tanks for collecting rain water, and either the latter or melted ice is always obtainable.”

Under the head of hygiene very much more might profitably be said, since many invalids fail to improve here as they ought, solely because of neglecting little precautions which, though apparently trivial, often make just the difference between success and failure; and a whole chapter might well be devoted to the subject of salt-water bathing, facilities for obtaining which in-doors are now obtainable at all seasons of the year. But this little pamphlet, hastily and imperfectly prepared in the hope that it may supply a want, has already far outgrown the dimensions originally contemplated.



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